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Australia, and Professor Lesley Head, University of Melbourne, Australia

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Introduction to *Hope and Grief in the Anthropocene*

Harriett Bulkeley

We are, Lesley Head argues, in a state of ‘collective denial’ (p.1) about our newly-found status as the first generations to inhabit an era we have come to understand as the Anthropocene. Even though we are confronted everyday with news from the frontiers of this epochal socio-material transformation, the Anthropocene often appears as a place to be found “elsewhere”—whether it be in mundane anecdotes of how the weather used to be at this time of year, or in alarming tales of catastrophic events, or in slowly accumulating wastes in the oceans, or in the rapid transformation of landscapes. The elsewhere characteristics of the Anthropocene are also strangely present in geography—one of the disciplines where it might be expected to be centre-stage. Along with other social scientists, human geographers have displayed deep ambiguity about the idea of the Anthropocene—as they have in relation to associated debates from climate change to ecological degradation. On one hand, it is a discipline whose members have sought to critically engage with our changing environment in

ways intended to advance thinking, inform action, and empower resistance. Yet, for large parts of the discipline, the point that we are inhabiting the Anthropocene is largely an incidental matter. Our understanding of and engagement with the subject-matter of economic geography, geopolitics, or urbanisation continues mostly untroubled by what it might mean to inhabit and know the world differently and in these new terms.

Hope and Grief in the Anthropocene opens up a new terrain through which to engage with this ambivalence and put it to more productive work. While acknowledging the spectre of socio-ecological transformation, Lesley Head starts by noting the multiple Anthropocenes that co-exist across the academy, policy settings, the media, and in everyday discourse. Where the dominant modernist narrative is of an Anthropocene caused by human disturbance and seeks to identify new ways to manage Earth's systems, Head takes us in a new direction—one imagining the Anthropocene as a set of differentiated conditions with which we need to come to terms. This work, she argues, requires critical engagement with cultural studies—disciplines and approaches that enable new conceptualisation of the relations between humans and nature; elicit the political and social conditions within which objectives and priorities are identified and enacted; identify norms and forms of differentiation; and recognise the thresholds and cultural resources that help to effect change. Advocating a cultural approach to understanding our changing socioecological relations, Head asks us not to consider how we might 'solve' the problem of the Anthropocene in a traditional sense but instead invites us to ask ourselves 'what might it mean to inhabit the Anthropocene? What does it mean for us to be citizens of the Anthropocene, both individually and collectively' (p.167).

Central to any response, Head argues, is the need to take grief and its politics seriously. The kinds of profound losses that the Anthropocene heralds cannot simply be swept under the carpet as we turn

the other way. The 'relentless cultural disposition to focus disproportionately on positive outcomes is itself a kind of denial ... [for] grief is a companion that will increasingly be with us' (p.2). There are, of course, everyday forms of loss that living in the Anthropocene might entail: of things foregone and of past patterns that can no longer be relied upon. Such instances are manifestations of something more fundamental: the loss of both the modern self and environment (pp.5–6). Far from seeking to rekindle modernist thinking and forms of intervention in order to escape the Anthropocene, Head argues that we need to recognise that the Anthropocene itself represents a fundamental break with core modernist concepts. For the modern self, the future is a place of possibilities, of improvement, of the promise of a better life. The Anthropocene casts such futures in doubt, requiring both a move beyond existing high carbon, high material lives enjoyed by a fraction of the global population, and that we think of new ways in which the self can be constituted in relation to uncertain futures. At the same time, modern ideas about the environment as a separate sphere that can be preserved and kept pristine from human interference are necessarily undermined by the Anthropocene and its challenging transgression of the boundaries between the human and the environment, placing each category under strain. But rather than see grief and the processes of mourning that accompany this emotional and cultural state as disempowering, Head argues that an active, conscious process of mourning can engender collective capacities and mobilise new-found resources. While grieving for our Anthropocene losses alone may lead to nothing but guilt and inertia, productive forms of grief may offer both a more progressive politics concerning what we can tolerate losing and ways of imaging new alternative futures. Yet, as the title of the book implies, grief alone is insufficient. Vital to the project that Head outlines is a space for hope. If optimism is either too technically deterministic, too naïve, or too saccharine, hope offers a different salve. Rather

than the empty promises of optimism which ask that we have faith in the future, Head asks that we seek out and enact a 'gritty, keeping-going kind of hope' (p.11). This form of hope, which draws across work from human geography, is conceived both as a disposition to the world and a set of practices to be exercised and experienced, and from which necessary disappointments also flow.

Of particular importance to the argument advanced in the book is the idea that fostering this form of hope in the Anthropocene requires some kind of disruption or rupture; requires that existing orders are questioned, undone, and sometimes painfully opened up to interventions. Through the second half of the book, Head explores different ways in which fragile and messy forms of hope are manifest in relation to Anthropocene encounters that prompt grief and loss. From the daily work of climate scientists to the quotidian ways that communities are learning to live with new urban ecologies, Head charts the graft of making our way through our new world(s). Each tale has much to tell us both about how the Anthropocene is being socially, culturally, and politically navigated and about the possibilities of opening up this arena to critical social science.

Panel Response

We, the Anthropoceneans? Thinking with grief, hope, and catastrophe in the Anthropocene

Georgina Drew

While forests fires rage in the dead of winter in southern California, the bright coral reefs off Australia's Gold Coast bleach and turn a ghostly white under a warming ocean. Even in high altitude regions, once prominent glaciers have begun to disappear from the mountain peaks of the Andes and the Himalaya as warmer than average temperatures are recorded year after year. The economic as well as the socio-cultural costs of such phenomena are high. As the news of these and many more

ecological disruptions bombard our screens and newsfeeds with increasing frequency, a general sense of loss and fear is induced in many. The current and future persistence of such phenomena, writes Lesley Head, means that the grief we feel for the massive climate transformations underway is not something that we can get 'beyond': rather, she suggests, it has to 'become part of our lives and politics' (p.33). It is that assertion that serves as the driver for much of her book, *Hope and Grief in the Anthropocene*. The text has a particular audience in mind: It is a collective set of 'moderns' that she later labels as 'Anthropoceneans'. In this wider category she more specifically addresses the perspectives and emotional responses of contemporary and future Australians alongside, though to a lesser degree, Aboriginal populations whose lives are highly influenced by the econocentric and environmentally polluting practices of settlers. As this collective population stares into the face of regional impacts of global climate change, Head cautions that our physical adaptation and affective responses will challenge 'a number of aspects of the modern self' (p.31). Among these are new practices and identities that will be forced once the fossil fuel economy is 'undone' (*ibid.*). In making this transition, propelled by anthropocene-induced collapse, several combating emotions such as denial, hope, and grief will be our companions.

Throughout the book, numerous Australian examples form the basis of insights from Head's many years of scholarly research on a wide array of topics. The aim is to uphold relevant learning from Australia for the rest of the world, since this is an 'exemplary place' from which we can contemplate everyday life on an increasingly volatile Earth (p.14). Her efforts in this regard tussle valiantly with the country's many colonial histories and significant contributions to global carbon emissions. It is via this nation-specific journey through grief (and some pockets of hope) in the Anthropocene that Head brings to our attention the value of native weeds and the governance

challenges of managing invasive plants. She forces us to contemplate how the disjointedness of today's rural agricultural transitions and growing urban sprawl pose particular problems and opportunities for the management of climate catastrophe. Adding to the patchwork of issues and perspectives we are asked to ponder are the emotional labours of, and coping mechanisms used by, Australia's leading climate scientists when at work or at home to keep 'the heart a long way from the brain'. There is value in these foci. As Head writes: 'The specificity of my examples reminds us that the Anthropocene is always somewhere, that it emerged in different times and that it will take different expression in different places' (p.15).

Head's contributions are significant, and they leave us much to think *with*. Hers is an important addition to a growing literature on the Anthropocene that includes theoretically rich and empirically specific work. What is striking in these texts are the strong disciplinary emphases made by authors writing on the topic and their efforts to move beyond research and theory silos to tackle the Anthropocene in ways that are increasingly interdisciplinary. As Head notes, present and impending climate phenomena are forcing those in the natural sciences to consider more seriously the role of people, while those in the 'human sciences are considering the non-human world more systematically' (p.56). This change is critical since the ecological and biosphere transitions that are projected under anthropogenic climate change know no disciplinary boundaries.

It is in the context of this growing need to consider the Anthropocene in ways that are increasingly interdisciplinary that one notes a strong leaning in Head's interventions to focus on a dataset that is highly secular in tone and scope. She acknowledges the Judeo-Christian influence on how Anglo-European settler colonial populations have shaped and responded to climate transformations. Yet, references to these influences are rather brief (see, for instance, page 62) and

raised to inform a post-humanist project that decentres the human subject while thinking about how more-than-human actors influence human interactions with their surroundings: 'For those of us who grew up with Western thinking, our most profound and important challenge is the challenge of reconceptualising human relations to the more-than-human world. It will not occur as a purely cerebral activity, but as a process of engagement with the dilemmas of everyday practice' (p.57).

What seems absent is a stronger interrogation of what 'Western' and indeed 'non-Western' thinking entails. A wide range of literature in a field loosely known as 'religion and ecology' has taken up this consideration as a point of serious investigation. Where classic critiques of the modern, including those provided by Bruno Latour (1993), leave us considering the post-enlightenment insufficiencies of the nature/culture binary—and the ways in which we have never been (truly) modern—work in religion and ecology asks us to question more fully how the planet's largest institutions (which are our 'world religions') have each helped to shape and perpetuate this binary. Those involved in such work in religion and ecology have also sought to understand how members of particular faiths have started to use their religious teachings and beliefs to amend some of the false divisions and separations that have contributed to mass destruction of landscapes and more-than-human entities. A compilation of such examples is evocatively presented in an edited volume from 2014 entitled *How the World's Religions are Responding to Climate Change: Social Scientific Investigations*. As the editors contend,

The social roles of religions and spiritualities vary tremendously among the peoples of the world, but what they say and do about climate change—whether they encourage attention to the issue or discourage it; whether they help their adherents recognize and cope with the

challenge of persuade them to ignore or deny it—could decisively impact how societies all over the world respond to it (Veldman, Szasz & Haluza-Delay, 2014, p.3).

In other words, religions influence whether or not people ignore or deny climate change just as they influence whether or not people try to address and amend its causes. In both instances, religious teachings and beliefs would serve to mitigate the hope for the future that some devotees might feel when confronted with news on their television and computer screens; it would also serve as a source of potential grief if they feel that their god (or gods) would prefer that they, and we, take better care of the planet and its multispecies inhabitants. The Encyclical Letter on Climate Change by Pope Francis, *Laudato Si*, for instance, strongly critiques ‘the crisis and effects of modern anthropocentrism’, and it entails what some may perceive as a hopeful call for ‘changed lifestyles’ and enhanced planetary stewardship. For current and future Catholics, even those that we might classify as ‘modern’, such texts could guide and change what Head might call their everyday or ‘vernacular practices’. After all, and as Evan Berry (2015, p.184) writes, Christian Americans have used a variety of scriptures and texts to validate ecological degradation while also, and alternatively, helping environmentalism to ‘grow organically’ around a vision of human flourishing that links the public good with spiritual well-being’. As a result, ‘The history of American environmentalism clearly indicates that the social landscape in which environmental goods are contested cannot easily be partitioned into secular and religious categories’ (*ibid.*).

It is worth underscoring that religions can foster dual and competing feelings of hope and grief at the same time. In my own work, I have documented how key texts and tenets of the Hindu faith inspire hope in devotees that the Ganges River, which embodies the spiritual force of the Goddess Ganga, will continue to flow and nourish Himalayan settlements despite the incidence of upstream

glacial melt and a decline in the river's flow due to the proliferation of hydroelectric projects. I have also documented how some devotees validate the need for Himalayan development projects while nonetheless expressing grief at the Ganga's deterioration and potential loss (Drew 2017). A key to understanding devotees' competing emotional responses is a circular notion of time marked by cycles of flourishing and decay, rather than a linear notion of time; this allows them to imagine that a Ganga in decline may one day revive when the world is rebalanced by cosmic forces. Such beliefs dim the desperation of the current moment while also propelling hope that a restoration of the balance of elements is possible despite present realities. Importantly, these insights include attention to the constant pressures of survival in precarious mountain landscapes. Acknowledging the competing pressures of livelihood demands and religious cultural duties requires myself and others to consider the role of 'everyday religion', including how people respond in contradictory ways to ecological concerns of religious importance (Drew 2016).

To this discussion, we could layer in various contributions to the ontological turn that ask us to consider more seriously the role of sentient non-humans and Earth beings. Such efforts examine the ways in which human interlocutors understand the responsibilities of planetary stewardship based on human-nonhuman interactions. Works by Marisol de la Cadena (2015) and Frédérique Apffel-Marglin (2011) are especially pertinent in this regard. They ask us to consider the decolonising efforts of Indigenous populations responding to Anthropocene-related changes by returning to long-held beliefs and time-honoured rituals. These are acts of hope as well as strong socio-political responses to the self-defeating practices of the 'moderns'.

Rather than being tangential, these points help us reflect further on the gamut of denial, hope, and grief that greets diverse populations whose members are confronting the dramatic, nay catastrophic,

transformations associated with the juggernaut of climate change. My point here is to ask rhetorically: Just who are we, ‘the Anthropoceneans’? For Lesley Head, these are the ‘citizens of the Anthropocene’ (p.167) but I wonder aloud if citizenship requires recognition of a state (even if it is one of being) to which we all belong. Yet, if we look at Australia’s demographics, we see many secular groups who are directly or indirectly influenced by various religiously-inflected ways of understanding whether or not climate change is human-induced, divine punishment, or part of a natural cycle. Such positions influence how people go about managing the grief, or the hope, ignited by the challenges at hand.

In making this observation, I do not mean to disagree with Head or to discount her analyses. Rather, I want to suggest that, as we continue to consider the ‘cultural politics of responding to climate change in the affluent West’ (p.167), we also continue to layer in even more of beliefs and actions that constitute the cultural and religious elements of the cultural politics at hand. There is, it seems, scope to build upon Head’s insights and arguments with even more interdisciplinary work that includes insights from studies attuned to the role of religion in everyday life. While such investigations might not save us from catastrophe, they may help to identify even more ways of living with the longstanding impacts of climate change through means that are either practically, cognitively, or ideologically significant—and perhaps even partially resilient.

Harriett Bulkeley — Against Optimism?

You do not go at a battle or a challenge with pessimism, because by definition you will not win. So that is why I bring [a] tsunami of optimism to this whole darn thing—because we have to. (Christiana Figueres, October 2017)

I'm a pessimist because of intelligence, but an optimist because of will. (Antonio Gramsci,
Letter from Prison, 19 December 1929)

Climate change is often acknowledged as one of the most wicked challenges facing contemporary society. Multifaceted, transcalar, and deeply politicised, questions of climate cut right to the heart of the organisation of the economy, notions of progress, and what it means to live a good life. And, as members of the international scientific community have continued to demonstrate, addressing climate change is a challenge that has only become more entrenched over the quarter century since that change first commanded global attention. As global greenhouse gas emissions continue to rise, temperature records are once again broken, and evidence accumulates about the manifold impacts that climate change is having on the global environment and its inhabitants it would seem that there is plenty to be pessimistic about. For over the past 25 years, that same international community has sought to address this challenge, corralling the latest scientific evidence into global assessments and establishing the apparatus through which the United Nations Framework Convention on Climate Change (UNFCCC) and consequential protocols and accords have been reached. Yet for all this effort, it appears that climate change continues to escape our grasp. For Lesley Head, it is both the spectre of catastrophe and the mundane ways in which we continue modern life as if its horizons remain unchanged that offer a starting point—a paradox to be explained and from which new thinking about how to navigate what it means to live in the Anthropocene can be generated.

As Head's book so clearly shows, for all the talk of climate catastrophe the public discourse is one of almost unabashed optimism. Christiana Figueres, former Secretary General of the UNFCCC and widely credited with creating the momentum that enabled the Paris Agreement to be reached, has inferred that to be pessimistic in the face of climate change is to admit defeat: what is required

instead is a 'tsunami of optimism'. In part, the wave of optimism manifest in and around the Paris Agreement reflects the disappointment encountered at the 2009 Copenhagen Summit where it seemed as if the potential for any form of coordinated international action on climate change had been forsaken. Yet climate optimism is both more enduring and more deep-seated than a spectre emerging in reaction to specific events. Thus, in her opening chapter Head argues that optimism is elemental to modernist accounts of the climate problem and how it should be addressed. There is, she argues, 'a deep cultural pressure' in Western societies not to be a 'doom and gloom merchant' (p.2). In mainstream science and policy, optimism seems a required emotional state for addressing the Anthropocene. This form of response to the climate problem requires extraordinary emotional labour on the part of climate scientists, who daily encounter evidence that might otherwise give strong grounds for pessimism. In Chapter 5, Head explores how climate scientists employ varied strategies to distance themselves from the emotional impact of their work to downplay doom and gloom. Her analysis provides a rare glimpse into the practice of climate science, one which goes beyond conventional accounts that seek to understand how scientists speak truth to power, focus on science-as-practice in accounts of the laboratory, technique, or model, or explore the ways in which such devices structure knowledge by demonstrating how such forms of emotional work come to shape understandings of climate change. One potential outcome, Head suggests, is 'an unjustified bias towards positive scenarios', an outcome also found in other research.

Deep-seated, culturally and politically constituted, optimism may shield us collectively from understanding the challenges with which we are confronted, while also directing our attention towards particular kinds of interventions and solutions rather than others. Optimistic calls for climate action are frequently accompanied by heroic narratives in which *someone* or *something* is invoked as

capable of mounting a rescue mission. Geoengineering is a case in point. If we are to be optimistic (as we must) about our capacities to address climate change, then what constitutes a feasible form of intervention is examined not only on its own terms but also in terms of the extent to which it enables the discursive construction of optimistic climate futures to be maintained. The twin value of technological fixes such as geoengineering lies both in the point that such fixes (may) provide a means to remove greenhouse gas emissions from the atmosphere, and enable us to feel optimistic about the possibilities of being able to manage and control climate change. Maintaining such optimism requires that any possible solution is heralded as both significant and feasible. The widespread faith in the potential for carbon taxes to bring forth the requisite shifts in the economy could be regarded as another such example. Yet as *Hope and Grief* explores, optimism is the emotional currency of the modernist response to climate change, essential for sustaining the sensibility that planetary control can be affected by interventions designed to manage our futures and reclaim some form of stable or pristine past. Optimism also serves to keep grief at bay. As Head argues, the kinds of grief encountered in the Anthropocene are not only for the parts of the world that we may lose touch with, but also for 'aspects of the modern self, including the way we are all embedded in the fossil fuel economy that must be undone' (p.31). Apparently trained on the external world, it seems that our feelings of optimism are also a means by which we dull the grief that accompanies the spectre of the loss of the modern self, seeking all the while to find a rescue from our predicament. For all our feelings of optimism, she argues, without the ability to engage with these forms of grief it may be that we end up feeling not very much at all.

The blind faith of optimism is leading our climate-changed selves to a dead end. Rather than invoking a tsunami of optimism, we should be cautious of the political work that optimism does and

of the emotional toll it may take. Yet, critically, this is not to argue that there are no grounds for hope in our response to climate change. Far from it. As Head's book title suggests, central to her argument is that hope is essential for being in and responding to the Anthropocene. Rather than emanating from an idealised vision of the world, 'hope savours the life and world we have, not the world as we wish it to be' (p.11). Drawing on work by Anderson (2006) and others, Head carefully contrasts the ideal, emotional state of optimism with what it means to craft hope—to work with what Gramsci termed as the pessimism of the intellect and the optimism of the will. Here, hope is both fuel for the imagination and for the practical, day-to-day work of making a difference. It can be characterised, Head suggests, as a process that necessarily disturbs existing orders, that is always accompanied by melancholy and grief, is never guaranteed, is always open to disappointment, and is part of the everyday. Hope, then, is about the *potential* for things to be otherwise. To have hope is to work with the understanding that the future has the capacity to be changed and that remains open in the face of what might appear to be foregone conclusions.

While hope may be an ever-present condition, it is 'moments of rupture or contexts of change and uncertainty [which] are the conditions that can create the spaces for such possibilities to emerge' (p.77). Thus, hope is intimately tied to forms of catastrophe, grief, mourning, and loss, which create the kinds of disruption needed for alternatives to grow, and hope can be fostered where small and often overlooked openings for those alternatives emerge. Here, Head draws on work by Mol (2006) to suggest that hope has an experimental tenor, its everyday 'gritty' qualities and capacity to endure being comparable to forms of tinkering that Mol identifies as central to the practice of medicine. Such forms of tinkering and experimentation are central to urban responses to climate change (Bulkeley *et al.* 2015; Evans *et al.* 2016). Experimentation can be regarded as a mode of governing

the city in relation to climate change that both seeks to account for the diffuse nature of authorisation and capacity in the urban milieu, and as a mode of response that seeks both to engage with and distance itself from the uncertainties of urban climate-changed futures. Experimentation enables agents of all kinds to step outside of what is constituted as their normal roles in cities and associated socio-technical systems, while retaining their identities and modes of operation.

Navigating between the present and the future, climate experiments occupy an essential if uneasy position in the city that can be regarded as a form of heterotopia (Edwards & Bulkeley 2018). For Foucault (1986, p.24), heterotopias ‘are something like counter-sites, a kind of effectively enacted utopia in which the real sites, all the other real sites that can be found within the culture, are simultaneously represented, contested, and inverted’. Likewise, climate experiments provide counter-sites in which both the future alternative and the present mainstream are coincident, serving as obligatory passage points through which are routed and materially enacted new social discourses about what it means, in this case, to be a good city. Such heterotopic moments and sites are central to *Hope and Grief*, whether in reference to domestic gardens in Sydney or rangelands of the far north of northern Australia, since the everyday practice of hope serves to disturb and remake both existing socio-natural orders and what it might be to live within the Anthropocene.

In *Hope and Grief*, Head has provided a provocative and essential argument—that living in the Anthropocene requires shifts *away from* modernist approaches to understanding, managing, and living with nature *and towards* more materialist, relational, and pragmatic encounters. Her work is not intended to deny either the severity of the challenges that lie ahead or the need for a determined response. Yet if there is one thing that the last 25 years of negotiation, struggle, and resistance in the face of climate change should have taught us it is that there is little to be gained in holding out for a

hero(ine). There is no singular technological fix, political process, or form of behavioural change that will undo our condition, and nor is there a superhero costume that we can don in order to become better climate-changed citizens. Climate change, and the Anthropocene more broadly, is not a suite of problems that can be solved in this traditional sense (Hulme 2009). Heroic optimism with its problem-solving gusto may be leading us astray. What we need to marshal instead is the everyday form of resolve to be found as we address loss, disrupt the present, and seek to make alternative futures. We need to be against optimism, and for hope.

Hope and Grief in the Anthropocene: Perspectives from ecology

Richard J. Hobbs

In 1949, Aldo Leopold wrote the following in “Round River”:

One of the penalties of an ecological education is that one lives alone in a world of wounds. Much of the damage inflicted on land is quite invisible to laymen. An ecologist must either harden his shell and make believe that the consequences of science are none of his business, or he must be the doctor who sees the marks of death in a community that believes itself well and does not want to be told otherwise. (Leopold & Leopold 1953, p.165)

Even today, this statement encapsulates much of what can be said about an ecological perspective on the topic of Lesley Head’s book. Ecologists are trained to examine and understand species interactions, ecological communities, and ecosystems. Hence, inevitably, they bump into the changes and losses that arise from ongoing and increasing human alterations of every aspect of planet Earth. Until a few decades ago, ecologists focused primarily on undisturbed “pristine” systems, because it was thought that these systems could provide the best understanding of how natural systems work.

Increasingly, however, this focus has broadened to encompass managed and altered systems—firstly because these now make up a large proportion of the Earth, and secondly because there is an urgent need to understand and manage these systems both in their own right and also in respect to the services they provide humanity.

The application of ecology in fields including conservation biology and ecological restoration meshes ecology with societal considerations and, in particular, places a layer of value judgements over the top of the species, assemblages, and ecosystems being considered. Hence, some species are considered valuable (for example, because of their utility, beauty or rarity) while others are considered undesirable (for example, because they become too numerous, cause problems for humans or other species, or simply because they are perceived not to belong because they originate elsewhere). Similarly, value is also placed on assemblages and ecosystems that are largely “natural” and which retain their original species compositions and are relatively unaltered. Conversely, systems that have altered compositions or are perceived to be degraded are considered to be in need of restoration to return them to a more valued state.

Recently, some of the major tenets of conservation biology and restoration ecology have been under scrutiny. In particular, questions have been raised concerning goals to maintain and restore systems so that they retain or regain an idealised composition. In the face of pervasive and ongoing change, are these valid or practical goals in all cases? As Lesley Head notes, these questions have resulted in large amounts of debate, sometimes rancorous, both among the members of scientific disciplines and practitioners. There is a fairly dichotomous split between those who wish to hold on to traditional perspectives and goals and those who think that these traditional perspectives need to be broadened to encompass the changed realities they perceive “on the ground”.

The debates have many dimensions but essentially they also have the subject matter of this book at their heart. On one hand, there is a desire to persist with strongly-held beliefs about the importance of maintaining traditional and fairly unitary perspectives on what is appropriate and necessary in conservation and restoration. This set of perspectives represents a belief that it remains both possible and also essential to maintain and restore systems in their current or former states. In this formulation, goals are relatively simple, and their achievement mostly depends on applying the right interventions—which in turn requires putting the necessary amount of time, effort, and resources into these activities. Hence, if only we could convince governments and society as a whole to invest adequately in conservation and restoration activities, it would be straightforward to achieve traditional goals across the board.

On the other hand, there is growing recognition that traditional perspectives and goals may no longer be adequate or appropriate in the face of radical environmental and social changes. From an ecological perspective, altered systems may be relatively unresponsive to traditional interventions. These altered systems may also now have considerable value in their current configuration, and values may actually be lost if attempts are made to push them back into their previous, “more natural” state. For example, increasing numbers of threatened species are being found to depend on habitat composed partially or entirely of non-native species. Further, from a societal perspective, while pushing for increased investment and effort in conservation and restoration remains an ongoing and essential task, it seems unlikely that the radical increases necessary to achieve the desired goals will occur any time soon. For these reasons, increasing numbers of ecologists and practitioners are advocating or adopting approaches that broaden the portfolio of options available—for instance, to include some degree of tolerance of non-native species, acceptance of altered

assemblages as useful conservation assets, and the potential to formulate restoration goals that do not involve full return to a previous or reference state.

The debate between these two perspectives has been caricatured as one that is between those who doggedly continue to believe that traditional approaches work and are essential, and those who have capitulated and want to throw the old approaches out and replace them with a new set of more pragmatic approaches. The reality is more complex than the caricature, however. The “revisionist” camp recognises the continued value of traditional approaches—but also suggests that these are relevant only in some cases. In other cases, alternative approaches may be more efficient and cost-effective and result in better conservation outcomes. The debate can, however, be considered in the context of held beliefs as opposed to pragmatic observation of ongoing environmental alteration (Karieva *et al.*, 2017).

Head’s book, *Hope and Grief in the Anthropocene* zeroes in on the layered dilemmas inherent in the debates discussed above. The quote by Aldo Leopold at the start of this essay highlights the element of grief inherent in an ecological understanding of the world. Leopold also recognises that society at large is less likely to share this understanding, and this remains a serious concern today. The debates that consume restoration and conservation are almost entirely irrelevant to a large proportion of the human population, either because they do not know about the issues, or do not care, or have other, more pressing concerns.

As Head points out, I recently examined the debates in conservation and restoration through the lens of grief and grieving (Hobbs, 2013). The core of my argument is that perhaps the debates have, at least partially, an element of differing responses to change and loss. Grief includes feelings of anger, denial, and despair, and many people involved in conservation and restoration are

undoubtedly experiencing these emotions. However, a degree of acceptance of change can open the way for a dissipation of these other feelings and a willingness to look for effective ways forward.

This acceptance could be viewed as “giving up”; however, it could also be perceived as a rekindling of hope for the future. As Head points out, hope is an essential ingredient for finding a path through the Anthropocene. Many people are still deep within the “world of wounds”, can only see bad things continuing to happen, mourn the losses, and rail against the lack of adequate societal response. It is possible, however, to continue to grieve for the losses and to recognise that there is still much of value worth protecting and restoring. Looking for alternative approaches is less about “giving up” and more about seeking a more hopeful way to the future. Within the fields of conservation and restoration, hope is a more constructive ingredient than despair. Across society at large, it is also becoming evident that people eventually turn off in the face of ongoing bad news about losses and disasters. In contrast, hopeful messages resonate and inspire people to be involved and seek positive change. *Hope and Grief in the Anthropocene* provides both a critique of current thinking around grief and loss in the Anthropocene and the start of a road-map towards a more hopeful future in a world of change.

Author Response

Beyond hope and grief

Lesley Head

I am very grateful to Georgina Drew, Harriet Bulkeley, and Richard Hobbs for taking time to engage with the ideas in the book from their own deep research expertise, and for pushing our ideas further. As they each extend the discussion in a different direction, I will first respond to them separately.

Georgina Drew raises the fascinating issue of the secular emphasis in my work, and the lack of perspective on religion, apart from some engagement with Indigenous spiritualities. She draws our attention to important bodies of work, including her own, examining relationships between religion and environment, and the diverse responses to climate change of people of faith. I thank Drew for her strong argument that, in considering the cultural politics of climate change, we should 'continue to layer in even more of the factors of belief and action that constitute the cultural and religious elements of the cultural politics at hand'. Katherine Hayhoe's heroic efforts, as an insider, to engage American evangelicals on climate change provide a well-known example. As someone still trying to shed the intellectual skin of my own religious upbringing and its particular version of human exceptionalism, I confess to having left this work to others, but I do acknowledge its importance, and the partiality of my own analyses.

Faith interacts with other sociocultural variables in environmental engagements in complex ways, as my collaborators Gordon Waitt and Louisa Welland (2017) and Heather Goodall (2012) have shown in relation to migrant water practices in Sydney that reflect Buddhist, Christian, and Muslim influences. In interviews undertaken by Natascha Klocker, Olivia Dun, and by me in Mildura and Robinvale in northwestern Victoria, we have uncovered a small but steady thread among Christians born in many different parts of the world to refer to 'God' and 'Mother Nature' controlling the weather, leading some to fatalism about the human potential to affect climate change. Other Christians use the same argument to articulate their responsibilities as stewards for or custodians of the land. I am grateful to Drew for raising these matters, and pointing to potential research directions. We also look forward to outcomes from research at the University of Wollongong by Christine Eriksen, funded by an Australian Research Council Discovery Early Career Researcher Award, that

investigates faith and disaster preparedness and response. It does strike me that there is potential here for scholars of affect, embodiment, and materiality to engage—to really interrogate what is meant by ‘spiritual’, and to ask how it is constituted as a separate and separable domain in some contexts.

Harriet Bulkeley identifies an important link between the kind of optimism I critique in *Hope and Grief* and the expectation that there will be heroes and heroines, as well as heroic narratives and rescue missions to save us from climate catastrophe. She cites geoengineering as one example; there are many others. Picking up on the examples of hope as experimentation I discussed in the book, Bulkeley threads connections with the broader conversation around experimentation in urban responses to climate change. She and her team have provided leadership in building international networks between different nodes of ‘heterotopia’ or ‘counter-sites’. If online accounts of the recent Intergovernmental Panel on Climate Change Cities and Climate Change Science Conference are anything to go by, this work is now resonating widely. Ideas of experimentation are of course not new, and I drew attention to disparate examples from my own research. (Drew generously makes it sound more coherent, using the term ‘patchwork of perspectives’. My Mum is a patchworker, so I know how much strategy goes into considering the relations between elements.) But as work by Bulkeley and others is showing, there is something distinctive about the contemporary urban experiment—fast, intense and generating paths of human and more-than-human life not experienced before.

If Jason Moore (2015) is correct that capitalism is indeed in its death throes because there is no Cheap Nature left, then there is a kind of hopeful experimentation happening in the great unravelling that is before us. There is a big research task in the overall exercise of cataloguing and mapping change and in determining how different approaches can inform one another; not, as Bulkeley

cautions, because there is a single solution but rather to make multiple connections of possibility. Can we think of this productively as unravelling and re-ravelling or rethreading in new ways? Chris Gibson and I have been thinking about this unravelling through the lens of everyday catastrophe (Gibson *et al.* 2015, and ongoing work). It is a difficult thing to envisage, but it does provide one way through the impasse of heroic solutions. If they do nothing else, all of these small experiments enhance someone's survival skills, and contribute to the kind of sociocultural and economic diversity that will proffer resilience in the face of severe shocks.

But these ways of thinking will do something else, because they are part of the process of envisaging alternative worlds. At the time of writing, Bulkeley and UK colleagues have been on strike for several weeks protesting against the downgrading of their pensions. The most interesting thing about observing this action from afar (and mostly through the lens of Twitter) is watching how the energy generated from collective action about one issue is now being directed to bigger issues, such as the desired future of the university. Thousands of UK academics are using this time of stepping out of their normal work routine to reflect on what academic life could and should be. We anticipate and should read with care the reflections that emerge from this period when the heat dies down.

Richard Hobbs has played an important role in influencing my thinking both in his pioneering work on novel ecosystems, and also in catalysing discussion of emotions among ecologists and biodiversity conservation scientists. He has been a generous interlocutor with social scientists and, while coming from a different standpoint, has been prepared to discuss points of connection between social and natural scientific approaches to changing ecosystems, including invasive plants (Head *et al.* 2015). In his contribution here he summarises the dichotomous and often rancorous debate

between “traditional” preservationist approaches to biodiversity conservation and more pragmatic responses to “altered” ecosystems, while also arguing that things are more complex than a simple divide. Some of these altered ecosystems are urban, but most are not. As counterpoint to the idea of the city as a space of experimentation, new configurations of human-environment relations are also appearing in rural areas.

If rethinking environmental scholarship away from the pristine and towards uncertainty seems to have resonated least of the book’s themes among wider audiences, Hobbs’s writings on the dichotomies in ecology help us to understand why. Human exceptionalism is well entrenched in many areas of the ecological sciences (Head 2017), with influences into wider domains of environmental management. I will need to find other ways to continue that conversation, and the work continues.

Hobbs’s lead on discussing emotions has been taken up by other scientists such as is evident in Morton’s (2017) work on pessimism. The theme of emotional responses to climate change is the aspect of *Hope and Grief* that has generated the most discussion. It is the issue I am asked to speak on most often; journalists are fascinated by it, students want to talk about it. There is a widespread hunger to articulate these emotions. However, there are also fascinating constraints about when and where we can (or cannot) have those conversations. In the Australian body politic the conversation sometimes seems to have stalled completely.

With regard to other responses I have had since I wrote the book, I take the opportunity to comment on two. First, a number of critical friends thought I could have expanded the discussion of emotions to include more both on writings around feminist anger (mentioned briefly on p.77) and on the need for such a mobilising emotion. Yes. Recent feminist scholarship (Ahmed 2017, Manne

2018) and wider social movements among women of different generations have shown the energising power of anger. They show the sheer amount of work involved in creating the conditions for change, and nevertheless underscore the point that moments of rupture and breakthrough arise in unpredictable ways.

Second, Manfred Lenzen, famous for his work on ecological footprint analysis, responded to my comment that we are all climate change deniers in the extent to which we are still living personal lifestyles that are way above any fair ration of the remaining available carbon budget. Manfred's challenge was whether "we" in the affluent west have any right to grieve, as we are still so deeply embedded as causal agents of climate change. Our conversations led to us convene a panel discussion at the Environmental Justice Conference in Sydney in December 2017. Speakers included climate scientist Sophie Lewis on the dilemmas of having a baby, and Andrew Glover on academic flying. We discussed the thorny issue of relationships between individual lifestyles and the broader patterns of socioeconomic life, including academic life. The conversation in the room indicated, for example, that there is genuine appetite for changing academic practices away from ideals of conference hypermobility. Nevertheless as an Australian audience, we were also very conscious that engaging with the international community usually involves getting on a plane at some point. Northern hemisphere thinkers who currently dominate debates and perspectives are also those who have the most alternative options to air travel.

Considering together the contributions by Bulkeley, Drew and Hobbs, I am struck with the patchwork (network, assemblage) of the scholarly life in the way it addresses the challenges of our time. We each have the opportunity to contribute our little bits of depth and colour, and the

responsibility to find as many connections as possible with those of others. Once again, many thanks to everyone who has taken the time to engage with the book.

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